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Postprint / Postprint

Zeitschriftenartikel / journal article

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### Empfohlene Zitierung / Suggested Citation:

Nöhammer, E., Stummer, H., & Schusterschitz, C. (2010). Improving employee well-being through worksite health promotion? The employees' perspective. *Journal of Public Health*, 19(2), 121-129. <https://doi.org/10.1007/s10389-010-0364-4>

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# Improving employee well-being through worksite health promotion? The employees' perspective

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# Improving employee well-being through worksite health promotion? The employees' perspective

## Abstract

**Aim:** The aims of the present study were to investigate the potential of worksite health promotion to improve individual well-being from the employees' perspective, analyze benefit categories and develop suggestions for future worksite health promotion program designs.

**Subject and Methods:** A questionnaire based on a qualitative study was distributed in four Austrian organizations to cover state-owned, private, and non-profit organizations. A total of 237 white-collar employees participated in the survey.

**Results:** Workplace health promotion does improve individual well-being from the employees' perspective. A factor analysis of the changes in well-being reported yields a three factor solution with a physical/cognitive element, a social component, and an emotional factor. In the sample tested, the physical-cognitive and emotional elements of perceived benefits were felt the most.

**Conclusion:** The current theoretical grouping of potential WHP effects requires further testing and might profit from being differentiated into more categories. Research on WHP could gain from a consideration of the employee's perspective by showing which program elements to focus on. Strengthening the emotional components of WHP information and offer design is proposed to increase participation rates and subsequent individual benefits derived.

**Keywords:** Workplace, Health promotion, effect, benefit, employee perspective

## Introduction

What determines individual well-being? How can it be achieved and then maintained? Researchers have so far explained the concept of well-being in different ways and according to Huppert et al. (2009) there is still no definition widely agreed on. A vast variety of factors regarding the personal disposition and the situational context influence how people perceive and evaluate how they feel or should feel, compared to others. While achieving personal well-being is thought to play an important role when individuals rate and choose options and behaviours (Rodogno 2008), personal and situational issues influence these decisional processes, as well (Heckhausen 2003). The outcome then has an effect on well-being, creating a dynamic interdependency, which on the one hand is sure to make any scientific model on the topic of well-being rather complex, but on the other hand it also makes clear that there are various possibilities to influence and improve well-being. These may in the long term also serve to even fluctuations of well-being. The present paper addresses this idea by

investigating which potential worksite health promotion (WHP) shows in improving individual well-being from the employees' perspective, which is an underrepresented research topic (Bödeker and Hüsing 2008). Moreover, there is no instrument available for analyzing employee perceived effects apart from medical criteria, which is why a quantitative questionnaire was developed based on available, mostly qualitative research, to find out which effects of WHP are felt by a larger number of employees.\_

## **Background**

WHP is one of the most prominent approaches to improve individual well-being in the work setting (Breucker 2000) and following the European Network for Workplace Health Promotion (ENWHP) is defined as “the combined efforts of employers, employees and society to improve the health and well-being of people at work” (ENWHP 2007, p. 1). It is a holistic concept incorporating (1) the improvement of the work organisation and the working environment, (2) the promotion of active participation of all stakeholders in the process, plus (3) the encouragement of personal development (ENWHP 2007). By doing so, WHP is expected to bring about positive changes in employee well-being over time, and to result in them achieving a higher general level of well-being so that even fluctuations of well-being do not reach as low a point as before. This outcome seems especially appealing since fluctuations in well-being may have a tendency to happen too quickly for any situational approach to take effect.

So far, experts assumed that positive effects of WHP for individuals can occur on the physical, mental, and social level (Westermayer and Wellendorf 2001). An alternative grouping is provided by De Greef and Van den Broek (2001) who present the findings of their review using headings referring to (1) awareness and motivation, (2) health and quality of life, plus (3) job satisfaction. For describing potential benefits also including effects not referring (solely) to the individual, Breucker and Schröer (2000) group into direct, intermediate, and long-term health and social effects. Anderson et al. (2001) provide a conceptual model differentiating between process, impact, and outcome. The impact, they state, can be cognitive/emotional and behavioural. The outcome categories regarding the individuals' health comprise (changes in) health risks, health status and well being. Organizational outcomes are subdivided into direct, indirect, and other.

General cognitive and affective outcomes were already reported in various studies (De Greef and Van den Broek 2001; Kreis and Bödeker 2003; Sockoll et al. 2008). Nöhammer et al. (2009) propose to add these as a discrete effect category to the currently used model of Westermayer and Wellendorf (2001) and to further enlarge the systematisation of effects by adding the facilitation of prevention. Drawing on these ideas, a basis for a quantitative investigation of employee perceived WHP benefits is created in the next sections. This is done by reviewing recent articles and reviews on effects of WHP using a concept of now five potential effect categories (physical, mental, social, general cognitive/affective, facilitation of prevention).

As for *physical outcomes*, depending on what WHP programs target, various results have been reported. Investigations in this area typically focus on the prevention of negative influences on physical health by tackling risk factors and indicate the reduction of health risk factor levels (Kreis and Bödeker 2003), illnesses and sick-days, occupational accidents, and disabilities (De Greef and Van den Broeck 2004). Research on behavioural changes (Breucker and Schröer 2000) and very specific interventions or health related outcomes (cholesterol level changes, etc) form the bulk of available studies (Helmenstein et al. 2004). Taken together, they imply a positive impact of WHP (Breucker and Schröer 2000; Kreis and Bödeker 2003).

Research on the effects of increased physical activity due to health promotion on (1) a reduction in as well as (2) prevention of the emergence of health risk factors like overweight, plus (3) a diminished likelihood of chronic diseases is already substantial on a general (WHO 2004) and at least indicative on the WHP specific level (Breucker and Schröer 2000; Sockoll et al. 2008; Goldgruber and Ahrens 2010). Moreover, it could be shown that physical activity decreases exhaustion and tiredness levels (Sockoll et al. 2008) and improves mental health (WHO 2004), which in turn positively influences the body.

Programs consisting of an assessment of health risks with subsequent individual feedback lead to behaviour change (reduced tobacco use, fat intake and heavy alcohol consumption, increased seat belt use and physical activity levels), improvements in blood test results (cholesterol level, blood pressure), a decrease in days of sick-leave, plus increased levels of well-being and health (Goetzel and Pronk 2010). Similar tendencies are also reported in reviews (see for example De Greef and Van den Broeck 2004) and studies of best practice

WHP programs (Grossmeier et al. 2010). According to Kreis and Bödeker (2003) and Sockoll et al. (2008) however, the results even of holistic programs can be considered as equivocal.

Analyzing high-quality WHP interventions including environmental modifications, Engbers et al. (2005) state strong evidence concerning the intake of fruit, vegetables, and fat, inconclusive evidence regarding physical activity levels, and no evidence regarding health risk indicators. Nöhammer et al. (2009) report that employees highlighted the general positive effects of WHP on their health status, the reduction or prevention of health problems, and changes in specific behaviours (nutrition, etc.) due to WHP interventions. Experts interviewed focused on the value of behavioural prevention, the maintenance or improvement of the current health status as well as early diagnoses of health risks (Nöhammer 2008).

Regarding *mental effects*, Breucker (2000) suggests WHP generally improves well-being by promoting more positive emotions at the workplace and by reducing work related strains. While psychological outcomes were of rather limited relevance in earlier WHP evaluation studies, the interest is growing now and focuses particularly on interventions targeted at stress (Sockoll et al. 2008). These are reported to have a “significant medium to large effect” (Goldgruber and Ahrens 2010. p. 77), but for achieving this seem to have to be very holistic and integrative (Sockoll et al. 2008). Stress management training can, for instance, result in fewer somatic problems and can improve the results of various blood tests (Ganster and Murphy 2000). Adding enhanced self-esteem (Badura and Hehlmann 2003; Birgmann 2006), satisfaction with the job (Birgmann 2006) and increased perceived meaning of one’s work (Badura and Hehlmann 2003) to potential psychological benefits, experts have high expectations of WHP. However, according to employees interviewed by Nöhammer et al. (2009), positive psychological outcomes are no automatic result of WHP. Nevertheless, employees as well as experts said the workforce felt appreciated by the company’s commitment to WHP and stated the possibility of a potential positive effect regarding mental hygiene, motivation and satisfaction (Nöhammer 2008; Nöhammer et al., 2009). There is evidence of an increase of motivation and satisfaction levels due to WHP offers and/or the individual’s participation in them (De Greef and Van den Broek 2004). As Anderson et al. (2001) note, higher satisfaction levels may not only lead to a better health status, but also a higher likelihood of remaining with the organization. According to De Greef/Van den Broeck (2004), this may also be due to an enhanced corporate image derived from the company’s commitment to WHP.

A higher retention rate due to increased satisfaction also has a social impact because of its stabilizing and potentially facilitating effect on the emergence of trust in the company. Not only for this reason, is WHP thought to be an investment in the company's overall social capital (Breucker and Schröer 2000). Badura and Hehlmann (2003) suggest salutogenetic potentials of WHP in the *social* realm especially regarding better flow of information and facilitated team work, which is also mentioned by Breucker (2000) and Birgmann (2006). Health experts interview by Nöhammer (2008) observed improvements in the internal climate and the relationships between superiors and subordinates as well as between colleagues. With regard to that, Breucker and Schröer (2000) refer to support derived by WHP for management functions and in creating a positive internal value balance. Moreover, positive changes were described regarding the internal communication and conflict solving processes (Breucker and Schröer 2000; Nöhammer 2008). When referring to social effects, employees underline the opportunities of getting to know other people within the organisation during various WHP activities (Nöhammer et al., 2009), which may also contributes to better communication lines.

Increased individual health awareness is either implicitly expected (De Greef/Van de Broek, 2004) or observed to be a result of WHP programs and trigger behavioural changes (Breucker and Schröer 2000). *General effects* are described by Nöhammer (2008) and Nöhammer et al. (2009) regarding cognitive and affective outcomes: potential positive changes concerning health attitudes and behaviour along with a better health awareness. The employees interviewed observed that their knowledge about health is enlarged, which was already hypothesized in the literature before (Birgmann 2006). Moreover, they stated feeling more productive, which was also reported by De Greef and Van den Broek (2004) and Grossmeier et al. (2010). Just as Anderson et al. (2001) found WHP programs to be popular with employees, Nöhammer et al. (2009) report that they enjoyed participating in WHP activities. The former reflects so far not completely substantiated hopes of managers as well as health experts, but may be caused by a general feeling of being healthier or be connected to social desirability. The latter might be connected to expert's expectations of positive emotions, which so far were rather described in line with organizational changes and improvements in the internal climate, but not enjoyment derived from WHP in itself.

The *facilitation of preventive activities* has already been reported in qualitative results, for example by Willams and Bruno (2007), but without labelling these as a potential effect

category. The employees interviewed by Williams and Bruno (2007) and Nöhammer et al. (2009) mentioned and substantiated facilitations regarding time, finances, medical and psychosocial aspects. Having access to health promoting activities at the workplace was also described as more convenient. Another factor might be that WHP offers tend to be cheaper than having to organize similar possibilities by oneself (Nöhammer et al., 2009).

As stated above, employees underlined that effects of WHP were not always perceivable. However, they never mentioned negative aspects of WHP except of (1) feeling annoyed by the company not focussing primarily on improving general working conditions or (2) being tired of internal changes. Experts, nevertheless, do report negative effects of WHP, for example in case the changes due to WHP (like improving the work hours, making the working environment healthier by having machines perform the risky tasks, etc.) result in people loosing risk payments (which are perceived as part of the income) or even their jobs. (Nöhammer 2008) This has already been very well described as health detrimental in the literature (Jahoda et al. 1933; Elkeles 2001; Lange and Lampert 2005). Further negative consequences of WHP are described by Haunschild (2003) who suggests programs could lead to an intra-organizational obligation to be healthy and potential health related privacy violations.

Drawing on the results reported above, it can be assumed that employees experience more potential effects of WHP that typically considered in research based on concepts so far available. Moreover, it remains unclear which outcomes of WHP perceived by the individual are genuine experiences and not prompted by research questions (i.e. effects that would otherwise not have been noted are checked in questionnaires because the items make the individual realize this outcome). As this effect cannot be reconstructed for most studies and reviews referred to above, the present investigation quantitatively tested the results obtained by Nöhammer et al. (2009) who exploratively interviewed employees about effects of WHP. In total, Nöhammer et al. (2009) conducted 19 problem-centred interviews with employees of three organizations - one non-profit, one public, and one privately owned. These were chosen based on the quality and duration of their WHP program. Moreover, the four people responsible for the programs at the organizations were interviewed. The interviews lasted for about 30 minutes each; questions posed were for example “Did your health status change due to participating in WHP programs? If yes, how? Positively or negatively?”, “Did you note further effects of WHP on your health, or other changes? In which areas? Were these changes



rather positive or negative?” [translation by the authors]. The interviews were transcribed, communicatively validated, and the results were clustered according to the resulting categories of effects of WHP mentioned by the employees (Nöhammer et al., 2009). Focussing on changes in well-being perceived by the workforce, these results were tested here in order to (1) explore their occurrence in a larger sample, (2) discover possible patterns to test the necessity of an extension of present effect categorizations, and (3) develop a ranking of effects to determine the potential of WHP in improving individual well-being.

## **Methods**

In order to investigate employee perceptions of changes in well-being through WHP, the results of a qualitative study (Nöhammer et al., 2009) were transformed into statements for use in a quantitative questionnaire. The latter was distributed in four companies to cover state-owned, private, and non-profit organizations. Participation in the study was voluntary; the participants were informed about the aims of the investigation and knew about their employer’s agreement to provide time for answering the questionnaire. Absolute anonymity was granted by providing centralized distribution as well as several possibilities for collection.

In total, 26 items referring to effects of WHP were generated. Of these, 15 statements reflect changes in well-being due to WHP and were thus used for the paper at hand. Response possibilities were presented in a Likert-type format ranging from 1 (disagree) to 4 (agree completely), without giving the option of a neutral category. Examples for the items are:

- I feel more motivated because the company offers WHP programs.
- By participating in WHP programs I can moderate beginning health problems.

The data obtained were analyzed using frequency, correlation and, factor analyses.

## **Results**

In the following sections, the results of the analyses we conducted are presented.

## Demographic sample description

In total, 237 people filled in the questionnaire. Of these, 55.3% were female and 42.2% male (rest: no indication of sex), with a mean age of 43.64 years ( $SD = 8.935$ ). The educational level was rather high with 43.5% holding a university entrance degree and almost 14% holding a university degree. This is due to the sample including only white-collar employees.

As can be seen in Figure 1, satisfaction with the current health status correlates with active participation in WHP programs. While at this stage of research we do not want to imply any causality in either direction, it is nevertheless quite interesting to note that the higher the satisfaction with the current health status is, the more do people actively participate in WHP over a longer period of time.

Insert Figure 1 about here

## Factor analysis

To test the requirement of a new conceptual grouping of WHP effects regarding changes in well-being, a factor analysis was conducted. In a first step, we did an exploratory factor analysis (principal axis analysis) with Oblimin rotation, treating the ordinal values obtained as pseudo-metric. Missing values were excluded pair-wise. With a Kaiser-Meyer-Olkin Criterion of 0.894 and 0.000 significance according to the Bartlett test, we have a good model fit explaining 66.47% of variance. A subsequent confirmatory analysis yielded no deviations. As can be seen in Table 1, a three factor solution emerges with a physical/cognitive element, a social component, and an emotional factor.

Insert Table 1 about here

The physical/cognitive factor comprises seven items referring to feeling healthier – in general as well as physically, paying more attention to health related issues and knowing more about these, feeling more productive and also noticing a reduction or prevention of current and/ or potential future health problems. Cronbach's alpha, testing internal consistency, is at 0.918 for this subscale, the item mean is at 2.858 with a variance of 0.058 (range: 2.634-3.347). The second factor, labeled social, consists of three items concerning improved contacts to co-

workers as well as a better basis of conversation with the supervisor. Cronbach's alpha is at 0.868 for this subscale, the item mean is at 2.729 with a variance of 0.107 (range: 2.352-2.930). The emotional factor comprises five items considering satisfaction and motivation, feeling appreciated, having better stress related coping abilities and having a higher capacity of distancing oneself from the job and relax after working hours. Cronbach's alpha is at 0.880 for this subscale, the item mean is at 2.836 with a variance of 0.176 (range: 2.491-3.551).

An overview of the statistical values of the items the factors consist of is shown in Table 2.

Insert Table 2 about here

It is surprising to note that in case the cognitive elements are not included, a two-factor structure results with a physical-emotional and a social component. When potential beneficial effects of WHP reported by Nöhammer et al. (2009) that refer to other issues than changes in well-being are also included into the analysis, a four component model is obtained. Nevertheless, a confirmatory analysis trying to find four factors also for items concerning changes in well-being only does not lead to better results than the original three factor solution.

### Effect ranking

To determine the potential of WHP in improving individual well-being, the agreement rates were analyzed. The agreement was grouped into five segments labelled as *very high* with an agreement rate of over 50%, *high* refers to 40-49.9% of agreement, *mediocre* to 20-39.9%, *low* to 10-19.9%, and *very low* to values below 10%. In Table 3, these results are shown together with the factor the items refer to based on the factor analysis described above.

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The highest values are achieved by an item of the emotional component of the model, feeling appreciated by the company, followed by a physical health related item that also results in getting the mind at ease: the prevention of beginning health problems. The subsequent values range in a category labelled mediocre regarding agreement, lie close and have no clear structure regarding factors. This is why means were calculated by adding the “agree

completely/agree” score per factor and dividing it by the number of items included as shown in Table 4.

Insert Table 4 about here

The results show that physical, cognitive and emotional effects are perceived the most, but still only by about a quarter of the employees. However, single items differ clearly from the mean score, as for example feeling appreciated.

## **Implications and Conclusions**

The investigation reported in the paper at hand was designed to analyze the potential that WHP programs show in creating positive changes in employee well-being from their point of view, which has so far been underrepresented in research. To date, academics as well as practitioners in the field were mostly drawing on expert’s opinions assuming beneficial outcomes of WHP for the workforce on the physical, mental and social level (Westermayer and Wellendorf 2001). Our results confirm that WHP has a positive impact on employee well-being in three areas also from the employee’s perspective. Nevertheless, a factor analysis of the changes in well-being suggests a divergent grouping of potential effects into physical-cognitive, emotional, and social effects. When more potential benefits are considered, including effects that do not imply changes in well-being, a four component model emerges, and in case cognitive effects are ignored, a two factor model results with a physical-emotional and a social component. This leads to the assumption that research on WHP could gain from a consideration of the employee’s perspective and the current theoretical grouping of potential WHP effects should be revised. A further reason for this is that benefits in the emotional realm are not always clearly labelled, but referred to as mental, affective, emotional, or psychological. By providing the exact items used for labelling the category labelled as emotional above, we add to finding a common definition.

Combing the three factor solution of changes in well-being with a frequency analysis of perceived effects, it can be stated that in the sample tested the physical-cognitive and emotional elements of perceived benefits are felt the most. Also, the emotional component is strong for variables referring to various status oriented items (which are not referring to changes in wellbeing and thus not reported in detail here). Almost 50% of the respondents for example experience joy due to program participation and feel WHP helps them care better for

their health. This outcome highlights the importance of emotions in the workplace and its relevance in the context of WHP. This combination has so far not been investigated in depth, which is why a consideration of the linkage is suggested for future research on health in the work setting. However, as we cannot exclude a potential bias of having especially those respond to the questionnaire that are already interested in WHP and enjoy taking part in related activities, the relevance of emotions may be lower when also potentially more indifferent employees are taken into account.

While positive changes can be expected to last especially due to sustainable effects by increased health related awareness and knowledge, which lead to increased self-efficacy and a dynamic cycle of well-being, benefits are not perceived by many. As mentioned above, only about a quarter of the interviewees stated perceiving changes in well-being on the physical-cognitive, emotional, and social level. In order to increase the amount of employees who state and also subjectively experience positive changes in well-being due to the WHP offer, one possibility is to increase the number of those participating actively. This could be done by considering the determinants of participation in WHP (Nöhammer et al., 2010) and might in turn lead to an increased satisfaction with the current health status of a larger proportion of the workforce due to the correlation of WHP participation and health satisfaction.

Current research mentions WHP related internal communication (Stummer et al. 2008) and WHP offer design (Nöhammer et al. 2009) as barriers to active participation. By improving WHP information, awareness of and interest in the program can be achieved. Having offers targeted at employee needs and communicating this properly should create a desire to participate and result in action. In case what was communicated holds true and is confirmed, adherence probability is increased, creating a dynamic, motivational cycle of Awareness – Interest – Desire – Action – Confirmation – Adherence. As a starting point and drawing from the present research, we propose strengthening the emotional components of WHP information and offer design.

#### Conflict of interest statement

The authors declare that they have no conflict of interest.

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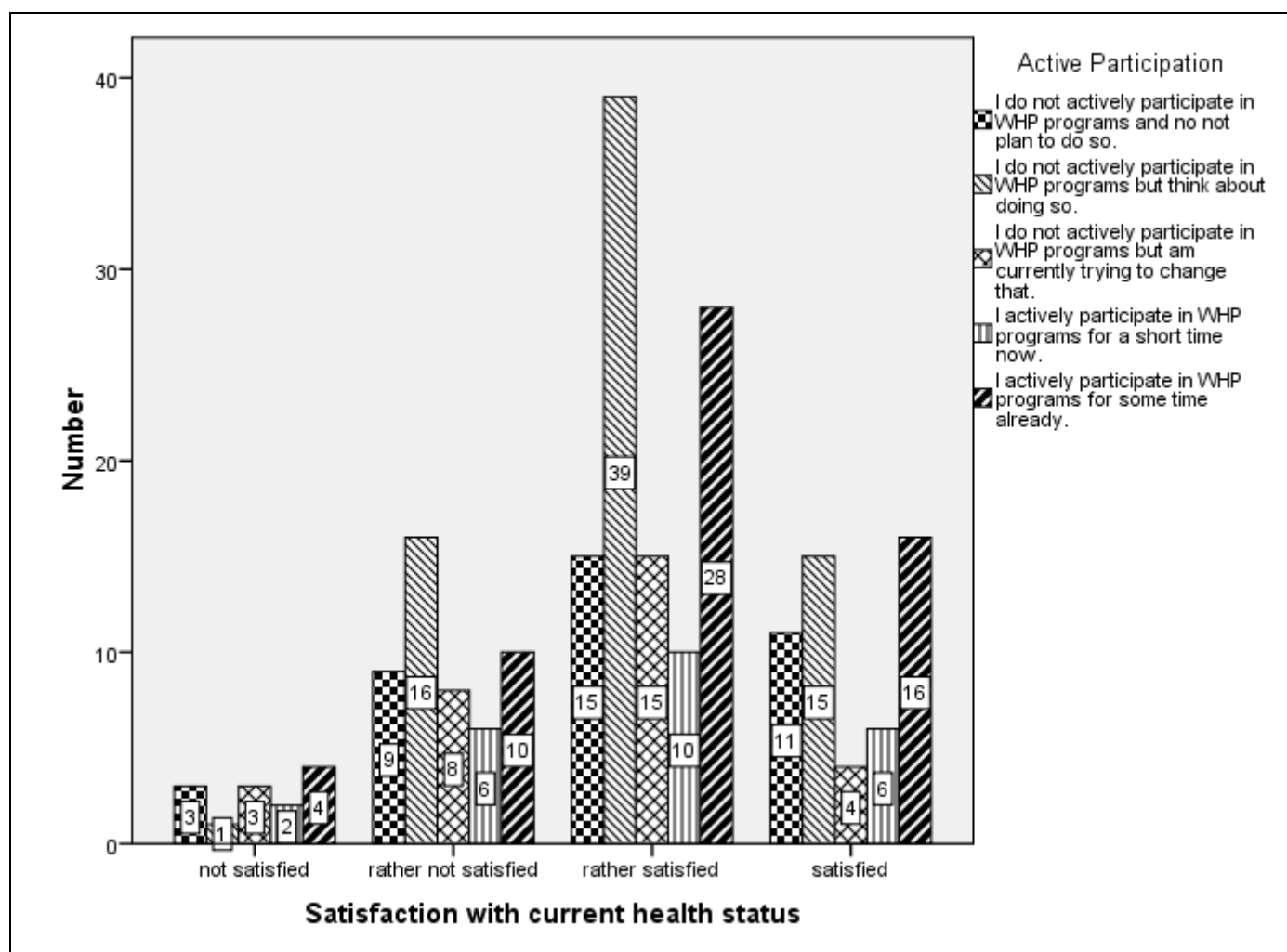
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**Fig. 1 Satisfaction with current health status and active participation in WHP; N= 237**



Created by PASW (SPSS) 18

**Table 1: Factor analysis**

| <b>Pattern matrix<sup>a</sup></b>  |                        |             |             |
|--|------------------------|-------------|-------------|
|  | Factor                 |             |             |
|  | Physical/<br>Cognitive | Social      | Emotional   |
| Feeling healthier due to participating in WHP program offers                                 | <b>,837</b>            | -,021       | ,056        |
| Feeling more productive due to participating in WHP program offers                           | <b>,824</b>            | -,046       | ,148        |
| Paying more attention to health since participating in WHP offers                            | <b>,812</b>            | -,045       | -,052       |
| Knowing more about a healthy lifestyle due to WHP program offers                             | <b>,788</b>            | ,019        | -,089       |
| Feeling physically better due to participating in WHP program offers                         | <b>,781</b>            | ,118        | -,006       |
| Reduction of physical problems are due to participating in WHP program offers                | <b>,655</b>            | ,113        | ,126        |
| Prevention of beginning health problems with WHP   | <b>,465</b>            | ,042        | ,174        |
| Contact with colleagues deepens due to participating in WHP program offers                   | ,011                   | <b>,987</b> | -,048       |
| Getting more personal contacts within the company due to participating in WHP program offers | ,008                   | <b>,936</b> | ,025        |
| Better basis of conversation with supervisor   | ,121                   | <b>,360</b> | ,291        |
| Feeling more satisfied with work   | -,005                  | -,049       | <b>,968</b> |
| Feeling more motivated because company offers WHP  | ,025                   | -,040       | <b>,853</b> |
| Better coping with stress and pressure due to participating in WHP program offers            | ,260                   | ,008        | <b>,569</b> |
| Feeling appreciated by the company due to WHP offer  | -,035                  | ,117        | <b>,530</b> |
| Better relaxing after work due to participating in WHP program offers                        | ,273                   | ,117        | <b>,492</b> |
| Eigenvalues  | 8.487                  | 1.286       | 1.008       |
| Explained variance   | 54.508                 | 7.553       | 4.410       |
| Method of Extraction: PA Factor Analysis   |                        |             |             |
| Method of Rotation: Oblimin with Kaiser-Normalisation  |                        |             |             |
| a. The Rotation is converged in 6 Iterations   |                        |             |             |

**Table 2: Item description**

| Items/Effects  | N     |         | Mean | Median | Mode | Standard<br>Deviation | Variance |
|--|-------|---------|------|--------|------|-----------------------|----------|
|  | Valid | Missing |      |        |      |                       |          |
| Feeling healthier due to participating in WHP program offers                                 | 221   | 16      | 2,76 | 3,00   | 3    | ,992                  | ,983     |
| Feeling more productive due to participating in WHP program offers                           | 218   | 19      | 2,68 | 3,00   | 3    | ,991                  | ,982     |
| Paying more attention to health since participating in WHP offers                            | 222   | 15      | 2,63 | 3,00   | 3    | 1,240                 | 1,538    |
| Knowing more about a healthy lifestyle due to WHP program offers                             | 226   | 11      | 2,77 | 3,00   | 3    | 1,192                 | 1,420    |
| Feeling physically better due to participating in WHP program offers                         | 222   | 15      | 2,93 | 3,00   | 3    | 1,035                 | 1,072    |
| Reduction of physical problems are due to participating in WHP program offers                | 223   | 14      | 2,91 | 3,00   | 3    | 1,110                 | 1,231    |
| Prevention of beginning health problems with WHP   | 219   | 18      | 3,35 | 4,00   | 4    | 1,100                 | 1,211    |
| Contact with colleagues deepens due to participating in WHP program offers                   | 217   | 20      | 2,96 | 3,00   | 3    | 1,103                 | 1,216    |
| Getting more personal contacts within the company due to participating in WHP program offers | 217   | 20      | 2,93 | 3,00   | 3    | 1,093                 | 1,194    |
| Better basis of conversation with supervisor   | 216   | 21      | 2,35 | 3,00   | 3    | 1,027                 | 1,056    |
| Feeling more satisfied with work   | 221   | 16      | 2,64 | 3,00   | 3    | 1,025                 | 1,050    |
| Feeling more motivated because company offers WHP  | 222   | 15      | 2,84 | 3,00   | 3    | 1,104                 | 1,219    |
| Better coping with stress and pressure due to participating in WHP program offers            | 218   | 19      | 2,67 | 3,00   | 3    | 1,031                 | 1,062    |
| Feeling appreciated by the company due to WHP offer  | 221   | 16      | 3,54 | 4,00   | 4    | 1,169                 | 1,367    |
| Better relaxing after work due to participating in WHP program offers                        | 217   | 20      | 2,50 | 3,00   | 3    | 1,028                 | 1,057    |

**Table 3: Effect ranking**

| Agreement                      | Potential Outcome  | Disagree/<br>partly<br>disagree | Neither/<br>nor | Agree<br>completely/<br>partly agree | No<br>answer | Factor     |
|--------------------------------|--|---------------------------------|-----------------|--------------------------------------|--------------|------------|
| <b>VERY HIGH</b><br>(≥50%)     | Feeling appreciated by the company due to WHP offer  | 16.0                            | 19.8            | 57.4                                 | 6.8          | <b>E</b>   |
| <b>HIGH</b><br>(40%-49.9%)     | Prevention of beginning health problems with WHP   | 17.3                            | 26.6            | 48.5                                 | 7.6          | <b>P/C</b> |
| <b>MEDIOCRE</b><br>20% – 39.9% | Getting more personal contacts within the company due to participating in WHP program offers | 23.6                            | 39.2            | 28.7                                 | 8.4          | <b>S</b>   |
|                                | Contact with colleagues deepens due to participating in WHP program offers                   | 22.4                            | 41.4            | 27.8                                 | 8.4          | <b>S</b>   |
|                                | Reduction of physical problems are due to participating in WHP program offers                | 26.2                            | 40.1            | 27.8                                 | 5.9          | <b>P/C</b> |
|                                | Feeling physically better due to participating in WHP program offers                         | 23.6                            | 43.9            | 26.2                                 | 6.3          | <b>P/C</b> |
|                                | Knowing more about a healthy lifestyle due to WHP program offers                             | 33.3                            | 36.7            | 25.3                                 | 4.6          | <b>P/C</b> |
|                                | Paying more attention to health since participating in WHP offers                            | 38.4                            | 30.8            | 24.5                                 | 6.3          | <b>P/C</b> |
|                                | Feeling more motivated because company offers WHP  | 27.0                            | 43.5            | 23.2                                 | 6.3          | <b>E</b>   |
| <b>LOW</b><br>10%-19.9 %       | Better coping with stress and pressure due to participating in WHP program offers            | 32.5                            | 42.6            | 16.9                                 | 8.0          | <b>E</b>   |
|                                | Feeling more satisfied with work because company offers WHP                                  | 32.5                            | 45.6            | 15.2                                 | 6.8          | <b>E</b>   |
|                                | Feeling healthier better due to participating in WHP program offers                          | 23.6                            | 54.9            | 14.8                                 | 6.8          | <b>P/C</b> |
|                                | Feeling more productive due to participating in WHP program offers                           | 26.2                            | 52.3            | 13.5                                 | 8.0          | <b>P/C</b> |
|                                | Better relaxing after work due to participating in WHP program offers                        | 38.0                            | 42.2            | 11.4                                 | 8.4          | <b>E</b>   |
| <b>VERY LOW</b><br>Below 10%   | Better basis of conversation with supervisor   | 38.0                            | 47.4            | 5.5                                  | 8.9          | <b>S</b>   |

**Table 4: Mean values of Agreement to Changes in Well-being**

| Mean value   | Percentage of<br>agreement | Rounded<br>percentage |
|--|----------------------------|-----------------------|
| Mean value for agreement to physical and cognitive effects | 25.80                      | 26 %                  |
| Mean value for agreement to physical effects               | 26.16                      | 26 %                  |
| Mean value for agreement to cognitive effects              | 24.90                      | 25 %                  |
| Mean value for agreement to emotional effects              | 24.82                      | 25 %                  |
| Mean value for agreement to social effects                 | 20.67                      | 21 %                  |